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DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/845,737

Applicant(s)

MURREN ET AL.

Examiner

Jeffrey R. Swearingen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 31-47 and 52-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 48-51 and 58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Arguments

1. A brief prosecution history of the application is provided to assist those unfamiliar with the current status of prosecution.
2. Applicant filed the instant application on 4/30/2001, on the same day as the filing of multiple co-pending applications containing elements directly imported into the instant application. The instant application was restricted on 12/13/2004. Applicant elected claims with traverse on 1/20/2005. A non-final action was issued on 3/7/2005 with a request for information under 37 CFR 1.105. Applicant responded on 9/12/2005. A second non-final action was issued on 11/30/2005 including a second request for information under 37 CFR 1.105. Applicant's response was filed on 4/28/2006. The Examiner initiated an interview with Applicant's representative on 6/10/2006.
3. Applicant failed to give the Examiner adequate information about the nature of the invention in two responses to non-final office actions and two responses to requests for information under 37 CFR 1.105. Applicant chose to state voluminous amounts of case law in lieu of responding to the substantive issues presented by the Office – the specification as originally filed is incomprehensible to one of ordinary skill in the art and is broadly readable upon the inetd module of UNIX or any program developed with an object-oriented programming language. The Examiner initiated an interview in an attempt to ascertain the nature of the invention in order to further prosecution. After conducting an interview at the request of the Examiner, the Examiner is still unclear about the nature of the invention.
4. Until Applicant is willing to clarify on the record what the invention actually is for the Examiner, no reasonable search of the prior art can be undertaken. Several Senior Examiners have been consulted within the Office in an attempt to clarify the invention, which is evidence contrary to Applicant's assertion on page 31 of the remarks that "others were not similarly stymied by the kind of exposition provided by the present application. This observation has at least a bearing on how the present application would be interpreted by one skilled in the pertinent art". The best interpretation reached by the Office of the claimed invention at this time is an object-oriented program with multiple layers that can be instantiated during execution to perform various functions.

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5. It is unclear how Applicant's submitted definition of "layer" applies to the application. Applicant's newly submitted definition of "layer" is directed towards the OSI model of computer networking, whereas Applicant seemed to indicate in the telephonic interview of 6/10/2006 that the application was an object-oriented software development environment. The responses under rule 105 indicate a possible credit card billing system over the Internet.

6. Applicant's varied responses have made it impossible for the Office to adequately figure out what the invention is, especially since this invention is a co-pending application with multiple other applications filed by Assignee. The other applications have been apparently combined into this single application, and review of all co-pending applications has still failed to shed light on the actual substance of the invention.

7. Applicant was further requested to provide a substitute specification since the originally filed specification was incomprehensible to one of ordinary skill in the art. Applicant argued that no deficiencies existed in the specification, and refused to submit a substitute specification. Such practice does not further prosecution of this application.

8. Therefore, **THIS ACTION IS MADE FINAL.**

9. Applicant's argument regarding the rejection under 35 U.S.C. 112, first paragraph, is not persuasive. One of ordinary skill in the art would be unable to implement the invention based upon the specification provided by Applicant. The enablement rejection is further refined in this action to clarify the Office's position on this matter for the record.

10. Applicant argued that one of ordinary skill in the art would understand what various "domains" were based on the specification recited by Applicant (cited on page 26 of Applicant remarks, 4/30/2006). Applicant never correlated any of the "example domains" with applicable portions of the claim language (problem domain, business purpose, business-related problem domain, problem domain which pertains to a particular category of service).

11. Applicant argued a "real world" application of the invention was (page 27, Applicant remarks, 4/30/2006) "field[ing] user queries in an online manner". Applicant is invited to explain what this is, as the Office is unclear what this "real world" application means. **If the Office cannot understand Applicant's**

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invention, it is evidently clear that one of ordinary skill in the art would also be unable to understand Applicant's invention.

12. Applicant stated multiple times that the invention is "defined by the claims". Unfortunately, if the invention is "defined by the claims", it is not necessarily enabled by the specification. One example of this is Applicant's interfacing layer, which is not present anywhere in the specification, and cannot be ascertained by reading the specification. Applicant provided support for this conclusion in page 1 of Appendix A, which clearly showed that the "interfacing layer" was being described as "various layers...that serve at [sic] interfacing role" while citing "at least page 12, line 1 to page 13, line 24". **No interfacing can be found or inferred from this citation of the specification.** This problem is evident throughout Applicant's mapping of the claims to the specification in Appendix A.

13. **Any amendments to the original specification regarding this issue are considered new matter when compared to the original specification. Applicant stated an amendment to the specification was made on page 30 of the remarks, yet the Office failed to receive said amendment.**

14. Applicant failed to substantively address the rejections under 35 U.S.C. 112, second paragraph. The Office cannot ascertain what Applicant meant by the multiple terms presented without any definition, and such definitions are not inherently present to one of ordinary skill in the art.

15. In regard to the rejections made over the prior art, Applicant is pointed to MPEP 2111.01, herein cited. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

16. The inetd daemon disclosed in Stevens has clearly disclosed a *multi-layer application executing on the computers to handle client requests submitted by various client devices, wherein the multi-layer application includes the claimed combination of a problem-solving logic layer, an execution environment*

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layer, an interfacing layer, and a presentation layer, wherein any of the layers may be changed without impacting other layers. Giving the terms in the claim their broadest reasonable interpretation, without considering that terms such as the *interfacing layer* are not found or supported within the specification, one of ordinary skill in the art would interpret the inet daemon to fulfill the metes and bounds of the claimed invention. Stevens disclosed a program module in UNIX that was clearly written with object-oriented programs, and the inetd module clearly could also be used as another software module in a further object oriented program.

17. Stevens disclosed a framework for UNIX network protocols. These protocols were designed for use with TCP/IP and inherently would interface with the OSI model. Therefore the presentation layer of the OSI model would be integrated with the claimed invention.

18. Applicant's amendment of *any of the layers may be changed without impacting other layers* was supported by Stevens, in that Stevens is a flexible programming structure designed for ease of use by one of ordinary skill in the art.

19. In regard to claim 48 and the arguments regarding *business-related problem domains*, Applicant is again directed to MPEP 2111.01, which recites that the broadest reasonable interpretation must be given to the claims. The cited portions of Stevens have disclosed the operations of *retrieving the data from one or more external resources and mapping the data to a domain framework for the business-related problem domain, the domain framework being independent from the problem-solving logic and interfacing the problem-solving logic to the domain framework to obtain the data for use in processing the request.*

20. In regard to claim 20, Stevens has disclosed a *hierarchy of constraints*, given the broadest reasonable interpretation of the claim language per MPEP 2111.01. Customization is taught throughout Stevens.

21. In regard to claim 10, Applicant states that "neither Stevens nor Gilly disclose an interfacing layer comprising a combination of a data abstraction layer and a data coordination layer as claimed." It is submitted that Applicant failed to disclose an interfacing layer within the specification. In light of this

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failure to disclose by Applicant, the broadest reasonable interpretation of the claim language is applied, per MPEP 2111.01.

22. In regard to claim 17, Applicant has traversed the Official Notice taken by the office regarding the presentation and rendering modules. Further excerpts of the Gilly reference are enclosed that clearly show that displaying data on a monitor was well known at the time of the invention. The presence of the presentation and rendering modules is inherent to displaying data upon a monitor. Rendering was used to create the proper pixel display for the monitor and presentation was used to format the data to send to the rendering module. This separation is necessary and common based upon hardware constraints.

23. Stevens has disclosed use of constraints in the form of parameters. Again, the broadest reasonable interpretation of the claim language is applied per MPEP 2111.01.

24. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

25. In response to Applicant's arguments concerning the Peek reference, Peek disclosed the limitations claimed by Applicant. Applicant has addressed the additional functionality of the claims but has not addressed it with regard to the Peek reference.

26. Applicant asserted that there were no "fair counterparts" between the instant application and the '752 application. Applicant provided no fair definitions in the instant application of the terms in question, therefore they are considered "fair counterparts".

27. Applicant failed to address any of the additional outstanding double patenting rejections against the instant application.

Drawings

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28. The drawings are objected to because, though the drawings are comprehensive in nature and cover multiple aspects of the invention, the drawings still fail to convey to one of ordinary skill in the art what exactly is being accomplished by the invention. The closest drawing that the Examiner feels is to showing the actual usage of the invention, which is still unclear, is Figure 20, which shows a login prompt on a web page and a human translator. Even with these two items present in Figure 20, and the descriptions given for this and all other submitted drawings, the Examiner is not assisted in grasping the invention at all based upon the currently submitted drawings. Applicant is reminded of the necessary compliance with 37 CFR 1.81(a), which states *The applicant for a patent is required to furnish a drawing of his or her invention where necessary for the understanding of the subject matter sought to be patented; this drawing, or a high quality copy thereof, must be filed with the application. Since corrections are the responsibility of the applicant, the original drawing(s) should be retained by the applicant for any necessary future correction.* [Emphasis added by the Examiner.] Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

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29. A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because of the following rejections under 35 U.S.C. 112 dealing with enablement and indefiniteness, in part because of the freedom Applicant has taken at being his own lexicographer, thus making multiple terms in the invention and claims difficult to understand. The substitute specification is also required to be in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b). The substitute specification filed must be accompanied by a statement that it contains no new matter.

The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

30. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood: problem domains, interfacing layer, changing layers so as not to impact any other layers, all terms rejected under 35 U.S.C. 112, second paragraph as indefinite.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

A shortened statutory period for reply to this action is set to expire ONE MONTH or THIRTY DAYS, whichever is longer, from the mailing date of this letter.

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31. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

32. Claims 1-30 and 48-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner submits that the specification and claims go into great detail on the technical aspects of the invention. But the Examiner strongly believes that the invention cannot be enabled because the Examiner cannot ascertain what the invention is attempting to accomplish. The specification refers to various modules, which are swapped out to adapt the architecture to different domains. [page 6] The Examiner requests that Applicant clearly cite where in the specification these various modules are defined and what they actually accomplish. The Examiner sees that Applicant refers to the use of this architecture in various domains, and gives examples of such. The Examiner is unclear how, if at all, the invention can be implemented to actually work in said various domains. The Examiner understands that Applicant wishes to receive all possible breadth of claim coverage. In this case, the Applicant has attempted to describe vaguely a multitude of uses for the invention with a very clear technical description of the underlying subject matter. Unfortunately this combination has made it very difficult to actually implement the invention because there is no hint of how to implement the technical disclosure. A broader, over simplified analogy could be made to a person who has being given a detailed schematic of a telephone wiring closet without saying why it is there, what the telephone wiring closet actually is, or how it can be used to connect telephones so people can talk to each other over them. That person would then be able to read and understand the schematic, but would suffer an unreasonable burden in attempting to grasp what the intention is of the device described in the schematic and then once the intention was discovered would suffer yet another unreasonable burden in actually deciding how the invention could be applied to various environments and implementing the invention to fit that inferred application.

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33. As per MPEP 2164, The purpose of the [enablement] requirement that the specification describe the invention in such terms that one skilled in the art can make and use the claimed invention is to ensure that the invention is communicated to the interested public in a meaningful way. The information contained in the disclosure of an application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention.

34. The test of enablement is "Any analysis whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of claims as to enable one skilled in the pertinent art to make and use the claimed invention...even though the statute does not use the term "undue experimentation", it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation." MPEP 2161.01

35. Several factors are considered when determining whether sufficient evidence to support a determination that a disclosure is enabled are presented in MPEP 2161.01(a). Four of those factors from *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) are found to be lacking.

36. The breadth of the claims: Applicant failed to provide information in the specification to allow one of ordinary skill in the art to ascertain the scope of the claims. The "domain" definition provided by the specification is never matched with the "problem domains" claimed.

37. The nature of the invention: Applicant failed to provide information in the specification to allow one of ordinary skill in the art to understand the nature of the invention.

38. The amount of direction provided by the inventor: Applicant failed to provide direction to allow one of ordinary skill in the art to understand how to implement the invention by failing to relate the invention to fields of art known to one of ordinary skill. For example, Applicant never included content relating to an interfacing layer in the originally filed specification. This failure immediately calls into question whether the disclosure when filed contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention based on the test of enablement in MPEP 2164.01.

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39. The quantity of experimentation needed to make or use the invention based on the content of the disclosure: Applicant failed to define multiple terms in the claims. Applicant did not provide any assistance in understanding the layering in the invention or the scope of the domains. One of ordinary skill in the art would suffer the burden of undue experimentation in understanding and implementing the invention based upon the amount of material lacking within the specification as originally filed.

40. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

41. Claims 1-30 and 48-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

42. Claim 16 recites the limitation "presentation tier" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

43. Claim 29 recites the limitation "locale-sensitive content" in claim 29. There is insufficient antecedent basis for this limitation in the claim.

44. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). With regard to claims 1-53, Applicant has freely acted as his own lexicographer. Applicant has used multiple terms that are not well known in the art and the Examiner has not encountered satisfactory definitions for said terms within the specification or within the prior art, including multiple technical and computer dictionaries, as to clear up this deficiency. The following are some of the terms that the Examiner has encountered within the claims that are not well known in the art, but this list is not meant to be limiting in that regard: multi-layer application, problem-solving logic layer, problem domain, execution model, execution environment layer, interfacing layer,

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framework, model dispatcher, request dispatcher, interaction-based model, interaction definitions, command model, action-view model, use case model, data abstraction layer, data coordination layer, domain framework, application data manager, application solution space, layout of individual replies, presentation theme, presentation module, rendering module, constraint system, hierarchy of constraint layers, constraint hierarchy, constraint resolver, legally mandated constraints, company-mandated constraints, cultural constraints, cultural aspects, low-level security rules, high-level permission concepts, form processor, form definition, resource bundle, locale-specific content, locale, resource bundle manager, locale-independent core, locale-sensitive content, computer-servable document. The terms are indefinite because the specification does not clearly define the terms to the extent required by the Examiner in order to allow one of ordinary skill in the art to reasonably understand the specification and invention with ease and clarity.

45. In general, the state of the disclosure and claims in the instant application preclude a limitation-by-limitation assessment of the claimed invention compared to the prior art. Therefore prior art is applied under 35 U.S.C. §§ 102 and 103 in an attempt to expedite prosecution in anticipation of future amendments rather than strictly based upon the examiner's assumptions. See *In re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962).

Claim Rejections - 35 USC § 102

46. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

47. Claims 1-9, 12-16, 18-21, 23-24, and 48-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Stevens (Unix Network Programming).

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48. In regard to claim 1, Stevens discloses *one or more computers; and a multi-layer application executing on the computers to handle client requests submitted by various client devices, the multi-layer application comprising: a problem-solving logic layer to process the client requests according to an associated problem domain, wherein the problem domain pertains to a particular category of service, the problem-solving logic layer containing one or more execution models to perform various sets of tasks when processing the client requests, the problem-solving logic layer producing replies to the client requests; an execution environment layer to receive the client requests and select an appropriate execution model in the problem-solving logic layer for processing the client requests; an interfacing layer to interface the problem-solving logic layer with one or more resources so that the execution models may utilize the resources when processing the client requests; and a presentation layer to receive the replies produced by the problem-solving logic layer and to structure the replies in a manner that makes the replies presentable on the various client devices, wherein any of the layers may be changed without impacting other layers.* Stevens discloses the inetd process that services multiple connection requests. As each request is received by inetd, it executes the appropriate server program to handle the request. [Stevens, 334-341] This is the *problem-solving logic layer*, the *interfacing layer*, and the *execution environment layer*. Stevens also describes common use of a *presentation layer* for presenting replies on various devices, as part of the OSI model. [Stevens, 7] By this rationale claim 1 is rejected.

49. In regard to claim 2, Stevens is applied as in claim 1. Stevens further discloses *a framework to receive the client requests and route the requests to the problem-solving logic for processing.* Stevens describes such steps in step 6 of page 337. By this rationale claim 2 is rejected.

50. In regard to claim 3, Stevens is applied as in claim 2. Stevens further discloses *one or more adapters to interface the framework with different types of the client devices.* See Stevens, 335. Stevens also speaks to *different types of client devices* on page 2. By this rationale claim 3 is rejected.

51. In regard to claim 4, Stevens is applied as in claim 1. Stevens further discloses *a model dispatcher to route the client requests to selected execution models in the problem-solving logic layer; and a request dispatcher to structure the replies for return to the client devices.* Stevens has already disclosed how inetd receives requests and routes them to the appropriate server programs for execution

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[*model dispatcher*]. Stevens also discloses that the socket interface in use with *inetd* on a UNIX system also supports *structuring replies for return to the client device*. See Stevens, 261, Figure 6.2. By this rationale claim 4 is rejected.

52. In regard to claim 5, Stevens is applied as in claim 1. Stevens further discloses *the multi-layer application can be adapted to receive requests from new client devices with incompatible communication protocols by substituting a new execution environment layer that supports the new client devices*.

Stevens discloses the ability to support multiple communication protocols on pages 259 and 271. The use of *inetd* with this ability should provide the same functionality as Applicant's claimed subject matter. By this rationale claim 5 is rejected.

53. In regard to claim 6, Stevens is applied as in claim 1. Stevens further discloses *a set of discrete program modules, each program module performing a specific task*. See Stevens, 334, and the discussion on daemons and process in **6.16 Internet Superserver**. By this rationale claim 6 is rejected.

54. In regard to claim 7, Stevens is applied as in claim 1. Stevens further discloses *an interaction-based model in which computer programs are defined by a series of interaction definitions*. See Stevens, 72-85 and the discussion **2.6 Daemon Processes**, which gives an example computer program defined by *a series of interaction definitions*, also known to one of ordinary skill in the art as having computer program code machine instructions or simply code. By this rationale claim 7 is rejected.

55. In regard to claim 8, Stevens is applied as in claim 1. Stevens further discloses *the execution models are embodied according to at least one of a command model, an action-view model, and a use case model*. Stevens dispatches programs to server processes, as shown in pages 334-341. These processes are *command models*. By this rationale claim 8 is rejected.

56. In regard to claim 9, Stevens is applied as in claim 1. Stevens further discloses *one of the execution models performs tasks according to a first business purpose, and the multi-layer application being reconfigurable to achieve a different business purpose by installing another execution model that performs tasks according to the second business purpose*. Stevens talks about using various execution models [programs, server processes] to achieve various *business purposes* such as *ftp, telnet, login, and*

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tftp. By initiating another server process, the server is *installing another execution model*. See Stevens, 335. By this rationale claim 9 is rejected.

57. In regard to claim 12, Stevens is applied as in claim 1. Stevens further discloses *the multi-layer application can be adapted to access new resources by substituting in a new interfacing layer that supports the new resources*. See Stevens, 261-267. By this rationale claim 12 is rejected.

58. In regard to claims 13-14, Stevens is applied as in claim 1. Stevens further discloses *the presentation layer being configured to select appropriate data formats for encoding the replies and the presentation layer being configured to select appropriate communication protocols for delivering the replies to the clients*. See Stevens, 250. By this rationale claims 13-14 are rejected.

59. In regard to claim 15, Stevens is applied as in claim 1. Stevens further discloses *the presentation layer is configured to determine how to display the replies for a particular client*. [Stevens, 250] By this rationale claim 15 is rejected.

60. In regard to claim 16, Stevens is applied as in claim 1. Stevens further discloses *the presentation tier is configured to determine at least one of (1) a layout of individual replies, (2) display attributes in which to present the replies, and (3) a presentation theme*. See Stevens, 250. By this rationale claim 16 is rejected.

61. In regard to claim 18, Stevens is applied as in claim 1. Stevens further discloses *an authentication module to authenticate the client devices or users of the client devices*. See Stevens, 430-436, where Kerberos authentication is disclosed. By this rationale claim 18 is rejected.

62. In regard to claims 19-21, Stevens is applied as in claim 1. In regard to claim 19, Stevens further discloses *a constraint system to constrain operation of the multi-layer application according to a hierarchy of different constraints*. In regard to claim 20, Stevens further discloses *a constraint system to constrain operation of the multi-layer application according to multiple different constraints, the constraint system comprising a hierarchy of constraint layers, with each constraint layer containing a set of one or more constraints that customize operation of the multi-layer application*. In regard to claim 21, Stevens further discloses *a constraint hierarchy of multiple constraint layers, each constraint layer containing a set of one or more constraints that constrain operation of the multi-layer application, the constraint layers being*

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organized within the constraint hierarchy such that a first constraint layer limits a second constraint layer but the second constraint layer does not limit the first constraint layer; and a constraint resolver to resolve the constraint layers so that operation of the multi-layer application is constrained by a set of the constraints in the constraint layers. Stevens discloses a configuration file for inetd and execution commands for each process called with multiple arguments for each process. See Stevens, 335-336. By this rationale claims 19-21 are rejected.

63. In regard to claims 23-24, Stevens is applied as in claim 1. Stevens further discloses a security policy enforcement module to enforce security restrictions on accessing information stored at the one or more resources, wherein the security policy enforcement module is to enforce the security restrictions based on a set of low-level security rules defined using high-level permission concepts. Stevens discloses file access restrictions in pages 31-32. By this rationale claims 23-24 are rejected.

64. In regard to claims 48-51, the limitations of these claims are similar to the limitations in claims 1 and 13-22. Therefore the rejections applied to these claims are applicable to claims 48-51. By this rationale claims 48-51 are rejected.

Claim Rejections - 35 USC § 103

65. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

66. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens and Official Notice.

67. In regard to claim 17, Stevens is applied as in claim 1. Stevens discloses a *presentation module to determine how the replies will appear on the client devices to users*. See Stevens, 250. Stevens fails to disclose a rendering module, otherwise known in the art as a program to assist in displaying

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information. However, Official Notice is taken that displaying information on a screen has been well known in the art for decades. It would be obvious to one of ordinary skill in the art at the time of the invention to display the information from a computer request on a screen so a user could see the results of the computer request. By this rationale claim 17 is rejected.

68. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens.

69. In regard to claim 22, Stevens is applied as in claim 21. Stevens fails to disclose the use of specific types of constraints [parameters, arguments] as defined in claim 22. However, Stevens has shown the use of constraints [parameters, arguments] in defining the use and limits of a program as applied in claim 21. It would be obvious to one of ordinary skill in the art to apply a plethora of types of constraints to the Stevens description to allow for specialized operation according to the user and system specific needs, including *legally mandated constraints, company-mandated constraints, customer constraints, cultural constraints, and end user constraints*. By this rationale claim 22 is rejected.

70. Claims 10-11 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens and Gilly (Unix in a Nutshell, O'Reilly and Associates, 1992).

71. Regarding claims 10-11, Stevens is applied as in claim 1. Stevens fails to disclose data conversion. However, Gilly discloses methods of converting data in the UNIX system. See Gilly, 10-1 – 11-11. It would be obvious to one of ordinary skill in the art to convert data in order to allow various server processes to accept the requests as specifically required by the preexisting server processes. By this rationale claims 10-11 are rejected.

72. Claim 58 contains the same substantive language as claims 1 and 10.

73. Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens and Peek (Unix Power Tools).

74. Regarding claims 25-28, Stevens is applied as in claim 1. Stevens fails to disclose a method for handling data forms. However, Peek discloses a UNIX tool that allows for handling a data form and receiving the information from that form. Peek, 875-879. It would be obvious to one of ordinary skill in the art to use the form capabilities of Peek with the teachings of Stevens to allow a user to input data easily. By this rationale claims 25-28 are rejected.

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75. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens and Tuthill (Creating Worldwide Software).

76. In regard to claims 29-30, Stevens is applied as in claim 1. Stevens fails to disclose internationalization of software [using *locale-specific content for a particular locale*]. However, Tuthill discloses an entire volume of ways to modify a program for international usage. To allow brevity of the legal record, the Examiner is only including the first chapter of this 382 page book. It would be obvious to one of ordinary skill in the art to combine the teachings of Tuthill with the teachings of Stevens to allow any program to have a worldwide audience. By this rationale claims 29-30 are rejected.

Double Patenting

77. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

78. Claims 1, 17, and 48-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 7-8 of copending Application No.

09/845,752. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the claims are substantially similar.

79. Claim 1 is listed in italics. **The relevant claim language of 09/847,067 is in bold.**

80. A server system comprising: one or more computers; **(one or more computers)** a multi-layer application executing on the computers to handle client requests submitted by various client devices **(an application executing on the computers to handle client requests)**, the multi-layer application comprising: a problem-solving logic layer to process the client requests according to an associated problem domain, wherein the problem domain pertains to a particular category of service, the problem-solving logic layer containing one or more execution models to perform various sets of tasks when processing the client requests, the problem-solving logic layer producing replies to the client requests; **(a business logic layer to process the client requests according to a particular business domain and produce replies to be returned to the clients in response to the client requests)**; an execution environment layer to receive the client requests and select an appropriate execution model in the problem-solving logic layer for processing the client requests; **(process the client requests according to a particular business domain)**; an interfacing layer to interface the problem-solving logic layer with one or more resources so that the execution models may utilize the resources when processing the client requests **(the request dispatcher being configured to access the tag library...)**; and a presentation layer to receive the replies produced by the problem-solving logic layer and to structure the replies in a manner that makes the replies presentable on the various client devices **(a presentation layer separate from, but in communication with, the business logic layer to structure the replies in a manner that makes the replies presentable on different types of client devices...)**, wherein any of the layers may be changed without impacting other layers. **(claim 2, wherein the application is reconfigurable to other business domains by substituting other business logic layers that are designed to process the client requests according to the other business domains)**

81. In regard to claim 17, a presentation module to determine how the replies will appear on the client devices to users; **(claim 8 - a presentation tier to determine how the replies will appear on the client devices to users)** and a rendering module, separate from the presentation module, to determine how to render the replies on the client devices. **(claim 8 - a rendering tier, separate from the presentation tier, to determine how to render the replies on the client devices)**

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82. Claim 48 of the instant application is listed in italics. **The relevant claim language of 09/847,067 is in bold.**

83. *A method for processing client requests in a system, comprising: receiving requests from multiple clients (one or more computers; and an application executing on the computers to handle client requests), wherein the business-related problem domain pertains to a particular category of business-related service; processing the requests within problem-solving logic to produce replies within the business-related problem domain, (a business logic layer to process the client requests according to a particular business domain and produce replies to be returned to the clients in response to the client requests) the processing comprising requesting data to be used in formulating the replies; retrieving the data from one or more external resources and mapping the data to a domain framework for the business-related problem domain, the domain framework being independent from the problem-solving logic; (a presentation layer separate from, but in communication with, the business logic layer to structure the replies in a manner that makes the replies presentable on different types of client devices (mapping the data to a domain framework) according to a tag library (external resource) containing pre-constructed tags for a variety of data formats and interfacing the problem-solving logic to the domain framework to obtain the data for use in processing the request, (a request dispatcher to structure a reply for service back to a client device, the request dispatcher being configured to access the tag library to obtain tags to structure the reply according to a particular data format) wherein a new business-related problem domain can be exchanged for a previous business-related problem domain by replacing one or more components of the system, without having to reconstruct an entire application solution for the new business-related problem domain. (claim 2, wherein the application is reconfigurable to other business domains by substituting other business logic layers that are designed to process the client requests according to the other business domains)*

84. In regard to claim 49 of the instant application, *structuring the replies for presentation to the clients. (claim 1, a request dispatcher to structure a reply for service back to a client device)*

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85. In regard to claim 50 of the instant application, *structuring the replies to define how the replies will appear when presented at the clients; and independent of said structuring, conforming the replies to output capabilities of the clients.* (**claim 7, the presentation layer is configured to determine how to display the replies for a particular client**)

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

86. Claims 23 and 24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 0/847,037 in view of 09/845,752. The addition of security features to a networking application is a logical and obvious step to one of ordinary skill in the art.

87. The analysis for claim 1 is shown above. Claim 23 of the instant application is shown in italics. **The conflicting claims are shown in bold.**

88. In regard to claim 23, *a security policy enforcement module to enforce security restrictions on accessing information stored at the one or more resources.* (**claim 1 or 6 – a pluggable security policy enforcement module...**)

89. In regard to claim 24, *the security policy enforcement module is to enforce the security restrictions based on a set of low-level security rules defined using high-level permission concepts* (**claim 6 – the different granularities of control comprise a plurality of sets of rules, and wherein each set of rules includes a plurality of permission assignment objects...**)

This is a provisional obviousness-type double patenting rejection.

90. Claim 25 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/845,752 in view of 09/847,037 and 09/847,038 and 09/845,751.

91. The analysis for claim 1 is shown above. Claims of the instant application are shown in italics. **The conflicting claims are shown in bold.**

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92. In regard to claim 25, *the presentation layer includes a form processor to generate a data input form for the multi-layer application by automatically adding, to a form definition that defines the data input form, validation code to validate subsequent inputs to one or more fields of the data input form.*

(09/847,037 claim 1 – accessing a computer program; automatically identifying a set of one or more attributes of the computer program with values that are to be input to the computer program by a user; and creating one or more forms including selected ones of the set of one or more attributes. 09/847,037 claim 2 – further comprising generating a list including the set of one or more attributes and outputting the list. 09/847,037 claim 3 – identifying the selected one or more attributes to include on the form; creating a data input field for the form definition via which a user can subsequently input a value for the attribute; and creating a submit tag for the form definition via which the user can subsequently input a request to submit the values on the form to the computer program. 09/847,038 claim 1 – receiving an indication of a desired form to be used for data input; automatically identifying one or more data input fields to be included on the form; and generating a form definition including the automatically identified one or more data input fields. 09/845,751 claim 1 – identifying a custom field on a source code form definition and one or more restrictions on an input to the custom field; identifying validation code that, when executed, validates that the input conforms to the one or more restrictions; and adding, to a new form definition that includes a non-custom field corresponding to the custom field, the identified validation code.).

This is a provisional obviousness-type double patenting rejection.

93. Claims 20-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 09/845,780 in view of 09/845,752.

94. The analysis for claim 1 is shown above. Claims of the instant application are shown in italics. The conflicting claims are shown in bold.

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95. In regard to claim 20, *a constraint system to constrain operation of the multi-layer application according to multiple different constraints, the constraint system comprising a hierarchy of constraint layers, with each constraint layer containing a set of one or more constraints that customize operation of the multi-layer application.* (claim 1 – **an application executing on the computers to receive and process client requests; and a constraint system to constrain operation of the application according to multiple different constraints, the constraint system comprising a hierarchy of constraint layers, with each constraint layer containing a set of one or more constraints that customize operation of the application).**

96. In regard to claim 21, *a constraint hierarchy of multiple constraint layers, each constraint layer containing a set of one or more constraints that constrain operation of the multi-layer application, the constraint layers being organized within the constraint hierarchy such that a first constraint layer limits a second constraint layer but the second constraint layer does not limit the first constraint layer* (claim 7 – **the constraint layers are organized within the hierarchy such that a first constraint layer limits a second constraint layer but the second constraint layer does not limit the first constraint layer); and a constraint resolver to resolve the constraint layers so that operation of the multi-layer application is constrained by a set of the constraints in the constraint layers.** (claim 8 – **a constraint resolver to resolve the constraint layers so that operation of the application is constrained by a sum of the constraints in the layers).**

97. In regard to claim 22, *the hierarchy of constraints comprises constraints selected from a group of constraints comprising: legally mandated constraints to constrain operation of the multi-layer application according to legal principles;* (claim 2 – **the hierarchy comprises a constraint layer that contains legally mandated constraints to constrain operation of the application according to legal principles);** *company-mandated constraints to constrain operation of the multi-layer application according to preferences of a company that operates the application;* (claim 3 – **a constraint layer that contains company-mandated constraints to constrain operation of the application according to preferences of a company that operates the application)** *customer constraints to constrain operation of the multi-layer application according to preferences of customers;* (claim 4 – **a constraint layer that**

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contains customer constraints to constrain operation of the application according to preferences of customers) *cultural constraints to constrain operation of the multi-layer application according to cultural aspects;* **(claim 5 – a constraint layer that contains cultural constraints to constrain operation of the application according to cultural aspects)** *and end user constraints to constrain operation of the multi-layer application according to preferences of an end user. (claim 6 – a constraint layer that contains end user constraints to constrain operation of the application according to preferences of an end user.)*

This is a provisional obviousness-type double patenting rejection.

Conclusion

98. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

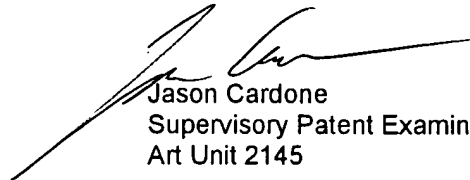
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jason Cardone
Supervisory Patent Examiner
Art Unit 2145